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(12) **United States Patent**  
**Imran**(10) **Patent No.:** **US 9,511,121 B2**(45) **Date of Patent:** **\*Dec. 6, 2016**(54) **METHOD FOR DELIVERING EXENATIDE TO A PATIENT IN NEED THEREOF**(71) Applicant: **Rani Therapeutics, LLC**, San Jose, CA (US)(72) Inventor: **Mir Imran**, Los Altos Hills, CA (US)(73) Assignee: **Rani Therapeutics, LLC**, San Jose, CA (US)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(51) **Int. Cl.****A61K 38/26** (2006.01)**A61M 25/10** (2013.01)**A61M 5/00** (2006.01)**A61K 9/00** (2006.01)**A61K 38/28** (2006.01)**A61K 45/06** (2006.01)**A61M 31/00** (2006.01)**A61K 9/48** (2006.01)(52) **U.S. Cl.**CPC ..... **A61K 38/26** (2013.01); **A61K 9/0053** (2013.01); **A61K 38/28** (2013.01); **A61K 45/06** (2013.01); **A61M 5/00** (2013.01); **A61M 25/10** (2013.01); **A61K 9/4808** (2013.01); **A61M 31/002** (2013.01)(58) **Field of Classification Search**CPC ..... **A61K 38/26**  
See application file for complete search history.(56) **References Cited****U.S. PATENT DOCUMENTS**3,788,322 A 1/1974 Michaels  
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Embodiments of the invention provide swallowable devices, preparations and methods for delivering drugs and other therapeutic agents within the GI tract. Many embodiments provide a swallowable device for delivering the agents. Particular embodiments provide a swallowable device such as a capsule for delivering drugs into the intestinal wall or other GI lumen. Embodiments also provide various drug preparations that are configured to be contained within the capsule, advanced from the capsule into the intestinal wall and degrade to release the drug into the bloodstream to produce a therapeutic effect. The preparation can be operably coupled to delivery means having a first configuration where the preparation is contained in the capsule and a second configuration where the preparation is advanced out of the capsule into the intestinal wall. Embodiments of the invention are particularly useful for the delivery of drugs which are poorly absorbed, tolerated and/or degraded within the GI tract.